

PART A – COVER PAGE

STATE WATER RESOURCES CONTROL BOARD
SFY 2002 Costa-Machado Water Act of 2000
CALFED Watershed Program

Application No. 369

PROJECT TITLE: Enhancing Local Capacity in North Richmond and Parchester Village to Manage and Restore the Lower Rheem Creek Watershed

Project Region x Indicate RWQCB #: 2
Multi-regional Project _____ Indicate RWQCB #s: _____
Statewide Project _____

PROJECT DIRECTOR (Ms., Mr., Dr.): Richard P. Walkling June 7, 2002
(one name only)

PRINT _____ DATE _____

LEAD APPLICANT OR ORGANIZATION: Natural Heritage Institute

TYPE OF AGENCY:

Municipality _____ Local Agency _____ *Nonprofit (non-landowner) x

Nonprofit (landowner) _____ Local Public Agency _____

STREET ADDRESS: 2140 Shattuck Ave, 5th Floor
CITY: Berkeley Zip 94704

P.O. BOX: _____ Zip Code: _____
_____ Zip Code: _____

COUNTY Alameda
STATE: California

PHONE NO.: 510.644.2900 x109 FAX NO.: 510.644.4428

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PROJECT TYPE: Watershed Protection Grant Program

LEGISLATIVE Senate District 7 & 9 Assembly 14

INFORMATION

_____ District _____
United States Congressional District CA-7

CALFED, RWQCB, or SWRCB STAFF CONTACTED REGARDING THIS PROPOSAL:

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PRIMARY COOPERATING ENTITIES:

Entity Name:	<u>North Richmond Neighborhood House</u>	
Role/Contribution to Project:	<u>Outreach, community organization in North Richmond</u>	
Contact Person:	<u>Whitney Dotson</u>	Phone No.: <u>510.235.9780</u>
E-mail address:	<u>N/A</u>	

Entity Name:	<u>Parchester Village Neighborhood Council</u>	
Role/Contribution to Project:	<u>Outreach, community organization in Parchester Village</u>	
Contact Person:	<u>Joe Brown, Chair Eddrick Osbourne</u>	Phone No.: <u>510.205.7611</u>
E-mail address:	<u>N/A</u>	

Entity Name:	<u>Urban Creeks Council</u>	
Role/Contribution to Project:	<u>Oversight of restoration, coordination with restoration volunteers, outreach and education</u>	
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Entity Name:	<u>Richmond High School- Science and Industry Technology Partnership Academy</u>	
Role/Contribution to Project:	<u>Environmental education</u>	
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WATERBODY/WATERSHED
(Include Catalog Number in Section
18 of the ARD):

San Pablo Bay 18050002

GPS COORDINATES FOR
PROJECT LOCATION, IF
AVAILABLE:

Lat: 37.9809
Lon:-122.3629

FISCAL SUMMARY:

Proposition 13 Funds Requested	<u>\$440,870</u>
Other Project Funds	<u>\$145,000</u>
Total Project Budget	<u>\$585,870</u>

CERTIFICATION

Please read before signing.

I certify under penalty of perjury that the information I have entered on this application is true and complete to the best of my knowledge and that I am entitled to submit the application on behalf of the applicant (if the applicant is an entity/organization). I further understand that any false, incomplete, or incorrect statements may result in the disqualification of this application. By signing this application, I waive any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent provided in this RFP.

Applicant Signature

Date

Richard P. Walkling

Printed Name of Applicant

PART B – PROJECT NARRATIVE

B.1 PROJECT ABSTRACT

This proposal requests three years of funding to build community capacity in North Richmond and Parchester Village to effectively manage the Lower Rheem Creek watershed and to restore 2,400 feet of Lower Rheem Creek.

This project has been designed to accomplish the CALFED Watershed Program's initial implementation priorities. The project's three primary objectives are to **develop a watershed assessment**, to **implement a specific restoration action**, and to **build community capacity** to effectively manage the watershed. And it does so amongst a demographic of the California population that has so far been underrepresented in CALFED.

The **overall goal** of this project is to create a model for the CALFED Watershed Program to increase capacity in urban, financially disadvantaged, minority communities to effectively manage the watershed through the use of CALFED's solution principles and the Watershed Program's primary objectives. It will represent one of the first attempts to apply CALFED solution principles in this setting.

This is an excellent opportunity for CALFED to engage a financially disadvantaged, urban population in a CALFED-style management process for the following reasons:

- Lower Rheem Creek, the Bay shoreline and its 400+ acres of undeveloped wetlands and uplands are unique, compelling and ecologically valuable resources of importance to the entire Bay-Delta ecosystem and its at-risk species.
- A detailed restoration design (*Lower Rheem Creek Restoration Plan*) already exists with landowner and stakeholder support, allowing for immediate community participation in an efficient, affordable, implementable restoration project (see schematic in Part H).
- Local groups already deeply involved in the community (social service providers, local high school, local environmental groups) have designed this capacity building project, thus ensuring access to local citizens and increasing the likelihood of success.

The Natural Heritage Institute (NHI), the North Richmond Neighborhood House (NRNH), the Parchester Village Neighborhood Council (PVNC), and the Urban Creeks Council of California (UCC), all members of the Rheem Creek Planning Council (RCPC) will implement this project with Richmond High School's Science and Industry Technology Partnership Academy.

B.2 BACKGROUND NARRATIVE

The Creek

Rheem Creek is a small stream that drains a 1.92-square-mile watershed in western Contra Costa County. The Lower Rheem Creek watershed is largely undeveloped and surrounded by the low income, minority communities of North Richmond and Parchester Village (see map in Part E). The watershed is unique in the Bay Area for its **400+ acres of tidal and freshwater wetlands and undeveloped uplands** (primarily Breunner Marsh and Giant Marsh). The 400+ acres of wetlands and uplands have enormous potential for education, recreation and restoration of CALFED priority target species, if managed appropriately.

In the early 1960s, the Army Corp of Engineers put the stretch of Rheem Creek that flows through the wide, flat floodplain between the hills and the Bay into a traditional, flood-control style channel (see photos

in Part E). Grade control structures and flood control levees have disrupted the natural hydrologic regime and negatively impacted the riparian and tidal wetlands.

While development has infringed on much of this creek's natural floodplain, there is sufficient room surrounding the stretch that flows between the Union Pacific Railroad Tracks and the Bay (see map in Part E) for the creek's natural sinuosity and floodplain to be recreated and restored. The mouth of the creek, too, has great restoration potential. As the creek enters the Bay, it is bordered on either side by salt marsh. This is perhaps the first instance of restoration of the mouth of a fresh water creek flowing into the San Pablo Bay and will yield valuable results for other such restoration efforts in San Pablo Bay watershed.

The watershed or segments of it have been identified in various planning processes over the years (e.g. *the North Richmond Shoreline Specific Plan*, the San Francisco Bay Area Wetlands Ecosystem Goals Project) as unique ecological features that should receive high priority protection and restoration.

Narrative of Project Planning

Several convergent efforts in the Rheem Creek watershed have culminated in the submission of this application.

In 1993, the City of Richmond, Contra Costa County, and the California Coastal Conservancy completed the award winning *North Richmond Shoreline Specific Plan* in anticipation of changes that would result from the extension of the Richmond Parkway, flood control improvements to creeks, and the closure of a local landfill. The goal of the plan was to "recognize the unique character of the area and to guide and regulate development in the area in a manner that improves its image, benefits community residents, and accommodates a reasonable level of development within a framework of conservation and public access to the Bay" (Brady and Associates, 1993). The *Specific Plan* explicitly called for modifications to Rheem Creek to enhance it as a riparian corridor, including "reshaping Rheem Creek to provide a low flow channel, floodplain terrace and riparian habitat zones." Additionally, the plan called for dozens of restoration actions in Rheem Creek including "annual cleanup campaigns conducted in conjunction with property owners, environmental interest groups or other service organizations" and "coordinat[ing] with property owners and special interest groups to organize monitoring activities."

In 2000, the North Richmond Neighborhood House, concerned that proposed development in the lower watershed was inconsistent with the *Specific Plan*, that citizen oversight was waning, and that much of the restoration had not occurred, began outreach regarding the watershed. Through formal and informal events, the NRNH began to inform its constituency of planned and pending land use changes in the area. The NRNH discovered almost immediately that there was an untapped wealth of interest in and concern for the environmental condition of the watershed, yet there were no formal means for community members to involve themselves in the stewardship and management of the watershed.

This resulted in the formation of the Rheem Creek Planning Coalition (RCPC). The RCPC is a multi-stakeholder group consisting of representatives of the NRNH, the Parchester Village Neighborhood Council, the Urban Creeks Council, the Natural Heritage Institute, the Contra Costa County Flood Control and Water Conservation District, Richmond Environmental Defense Fund (a local non-profit), the Army Corps of Engineers, the City of Richmond, and Save the Bay with the stated intention of restoring Lower Rheem Creek.

In 2001, the Urban Creeks Council, which has years of restoration and planning experience in the East Bay, began working with the Contra Costa County Flood Control and Water Conservation District, local landowners and other stakeholders to design a stream-meander restoration plan for Lower Rheem Creek consistent with the design guidelines in the *Specific Plan*. The project, funded by the California Costal

Conservancy, consisted of a feasibility study and a conceptual design for meander restoration in Lower Rheem Creek (see schematic in Part H).

The proposed project will implement this restoration design, complete a watershed assessment, and build community capacity through the efforts of the Natural Heritage Institute, the North Richmond Neighborhood House, the Parchester Village Neighborhood Council, the Urban Creeks Council of California, and Richmond High School's Science and Industry Technology Partnership Academy. This is a unique and innovative public/private partnership of social service providers, educational institutions, and environmental groups that if successful, may serve as a model for future stewardship activities in urban areas.

B.3 SUPPORT FOR CALFED PROGRAM OBJECTIVES

This project has been designed with the **CALFED Watershed Program initial implementation priorities** in mind. The project's three primary objectives are to **develop a watershed assessment**, to **implement a specific restoration action**, and to **build community capacity** to effectively manage the watershed. And it does so in a demographic of the California population that has so far been underrepresented in CALFED.

This project intends to build on the existing planning and design (as described in the *Lower Rheem Creek Restoration Plan*), and combine the restoration of the creek with outreach and education to involve local citizens and students in the management of the Lower Rheem Creek watershed consistent with CALFED Watershed Program initial implementation priorities and CALFED Program Implementation commitments. These actions, when combined, will not only fulfill obligations of the CALFED Watershed Program but increase support for the CALFED Watershed Program amongst Californians.

This proposal supports **Ecosystem Restoration Program Stage 1 objectives** including restoring riparian, aquatic, and seasonal wetland habitats; implementing projects on selected streams to provide additional upstream fishery habitat; providing incremental improvements in ecosystem values throughout the Bay-Delta system; and pursuing actions that are opportunity-based. Lower Rheem Creek restoration achieves several ERP goals and benefits many target species. The project contributes to several of the ERP's North San Francisco Bay targets spelled out in the ERP's *Summary of Targets and Programmatic Actions Sorted by Ecological Management Zone*. These include:

- Maintain and improve existing freshwater fish habitat;
- Restore 10 to 15 linear miles of riparian habitat; and
- More closely emulate the natural pattern of seasonal freshwater inflow to North San Francisco Bay to transport sediments and contribute to riparian vegetation succession.

Additionally, the project will address:

At-Risk Species. This project benefits all species and life-stages using the San Pablo Bay. Rheem Creek meander restoration will improve habitats and populations of at-risk species and improve water quality entering into San Pablo Bay.

Ecosystem Processes. Both in the near term and over the long term, proposed tasks will provide more natural sediment and nutrient supplies to the San Pablo Bay. If the San Pablo Bay, and especially the North Richmond shoreline's role as nursery and feeding ground is to be maximized, habitat and water quality conditions in the San Pablo Bay watershed must be maintained and improved. Improving ecosystem processes helps reverse downward population trends of native riparian and aquatic species that are not yet listed, and prevent establishment of non-native species.

Habitats. Rheem Creek restoration will improve aquatic riverine habitat and riparian habitat. Other tasks will create an adaptive management program for other habitat types in the watershed including tidal marsh, seasonal wetlands, uplands, riparian and aquatic riverine habitats.

Sediment and Water Quality. Proposed tasks will increase awareness of urban effects on water quality, the role of natural streams in improving water quality and reduce sedimentation, water temperatures.

This proposal complements **CALFED Water Quality Program goals** by improving the quality of inflows to San Pablo Bay, benefiting all organisms living in and passing through the North Bay. Restoring meanders has proven benefits to water quality by reducing velocities, and allowing for greater filtration and deposition of sediments (Rinaldo and Johnson, 1997 and 1998; Brookes, 1987).

Quantification of Benefits to CALFED Watershed Program

Successful implementation of this project will not only have the above stated impacts on the watershed and on the communities involved, but will improve the performance of the CALFED Watershed Program. The project would quantifiably increase the following metrics outlined in the *Draft CALFED Watershed Program Performance Indicators and Measurements Summary*:

- Increase in number of active partnerships working to execute the Program Implementation Plan annually
 - As many as a dozen or more new partnerships could be created by this project, including some innovative ones that will involve neighborhood social service providers in restoration activities
- Number of government/non government watershed management partnerships supported by the Program
 - Activities of non-government project proponents will be coordinated with those of City of Richmond and county flood control district and other government partners
- Percent increase in participation in existing local watershed management initiatives
 - Watershed represents an excellent opportunity for the Program to engage in local watershed management initiatives and is a model for future involvement in urban areas
- Number of new projects that involve multiple agency participation
 - Project involves multiple organizations coordinating to manage and restore watershed. Successful project is likely to inspire many more new projects
- Number of coordinated inter-agency project solicitations with Program participation and/or support
 - Successful project is likely to inspire many more new projects
- Percent of Solution Area with active watershed management efforts
- Completeness of data deemed necessary to make effective Program management decisions
 - Distribution of watershed assessment and coordinating and disseminating monitoring results will improve completeness of data
- Percent area of the Bay-Delta system with completed watershed assessments
- Level of confidence (of Program and Science Program) in science used to report on status and trends in the Bay-Delta watershed
 - Rigorous scientific review and protocols in project will increase level of confidence
- Number of supported projects that produce significant direct scientific connections between implementation and physical effects in the watershed
 - Monitoring of restoration will provide scientific data relating to restoration, especially regarding in mouth of freshwater creeks entering San Pablo Bay
- Percent of Program supported projects using compatible monitoring methods and metrics that allow regional and cross-watershed comparisons

- Monitoring will be coordinated with CMARP, county efforts, and other monitoring protocols
- Percent of monitoring data generated from Program supported projects that is useful when compiled at a regional and/or state level
 - Monitoring will be coordinated with CMARP, county efforts, and other monitoring protocols
- Number of people trained through Program- supported activities annually
 - Students and volunteers will be trained in monitoring and restoration skills
- Percent of general public with medium to high knowledge of the Watershed Program
 - Students and citizens will be informed about the goals and objectives of the CALFED Watershed Program
- Percent of general public with medium to high knowledge of watershed functions and characteristics
 - Students and citizens will be informed and educated on watershed processes
- Number of proposals received in response to Program Solicitations for Proposals
 - Project will result in other proposals for continued support or similar projects elsewhere based on successful model
- Ratings received from participants in Program supported training and education workshops
 - Experience of project proponents ensures high ratings for quality of training and education
- Percent of school systems in the Bay-Delta watershed with watershed education programs in place
 - Coordination with Richmond High School will account for watershed education program
- Increase in average time of existence for local watershed management initiatives in the Bay-Delta system
 - Sustainable management plan designed by this project will increase duration of local management of the resource
- Percent of watershed management costs covered by locally generated financial and technical support
 - Local stewardship and involvement in management will increase citizens' willingness to fund management from local sources
- Hydrograph adjustments towards selected minimal disturbance reference hydrographs in watersheds where Program-supported activities take place
 - Meander restoration will reduce runoff velocity and increase groundwater infiltration towards a more natural, undisturbed hydrograph
- Number of tributary watersheds with unimpaired beneficial uses of water
- Percent increase in contacts between the Program and local watershed management initiatives
- Spatial distribution and contiguity of wildlife habitat in watersheds tributary to the Bay and Delta
 - Restoration will help link Giant and Bruener marshes with other wetlands and ecological features south of Rheem Creek
- Linear extent of watershed tributaries with available floodplains at the 25% recurrence level
 - Meander restoration will allow floodwater access to floodplains at less than 25% recurrence level
- Percent of Bay-Delta watershed implementing science based management plans
 - Adaptive management component of project will ensure a science based management plan for the lower watershed
- Percent of Bay-Delta watershed with acceptable (as judged by the Science Program) status and trends data
 - Monitoring will be coordinated with CMARP, Science Program, county efforts, and other monitoring protocols

B.4 SCIENTIFIC BASIS FOR AND TECHNICAL FEASIBILITY OF RESTORATION

Restoration of stream meanders is a well-established method for improving aquatic habitat and stream function (Rinaldo and Johnson, 1997 and 1998; Brookes, 1987). Very simply put, the **conceptual model** for meander restoration is that it will increase structural habitat complexity, reduce slope, reduce velocity, increase filtration and deposition of sediments, and improve water quality.

Far West Restoration Engineering designed the meander restoration based on watershed hydrology, geomorphic surveys of the creek, stable channel design parameters and other relevant inputs. Far West Restoration Engineering and the Waterways Restoration Institute have developed meander restoration sizing methods for Bay Area streams. The bank full cross sectional area and the bank full width are a function of sizing curves developed by Dunne and Leopold (1978) and Waterways Restoration Institute (1999). The sinuosity is a function of the valley slope/channel slope. Far West Engineering has successfully applied these methods to dozens of Bay Area streams, including several restored by the Urban Creeks Council.

B.5 WATERSHED CONTEXT

The project is consistent with the *North Richmond Shoreline Specific Plan*, the primary planning document pertaining to the Lower Rheem Creek watershed. The project is designed to fulfill some of the design actions recommended in the *Specific Plan* as described above.

This project is also consistent with all the planning and design already funded by the California Coastal Conservancy and implemented by the Urban Creeks Council (*Lower Rheem Creek Restoration Plan*). The inclusion of the Urban Creeks Council as an implementing partner ensures both coordination with and continuity of these efforts.

The other major restoration activity in the watershed is the Breuner Marsh Mitigation Bank. The San Francisco Bay Area Wetlands Ecosystem Goals Project identified Breuner Marsh as a unique restoration opportunity and recommended the protection and restoration of the marsh and its adjacent uplands. Bay Area Wetlands, LLC is in the planning stages of restoring the marsh as a mitigation bank. The Urban Creeks Council and the Natural Heritage Institute have closely coordinated this project with the actions of Bay Area Wetlands, LLC to maximize the benefit from both projects. Planning of this proposal, planning and design of Lower Rheem Creek restoration has been done with input from Bay Area Wetlands, LLC.

Project proponents have also begun coordinating with other monitoring activities that are planned for the watershed but have not yet begun. Contra Costa County Department of Public Works is planning a county-wide habitat assessment program complete with monitoring protocols. Additionally, the county is developing a Watershed Atlas and Creek Restoration Strategy. Project proponents have been in contact with representatives of both programs.

B.6 SUPPORT FOR LOCAL DECISION MAKERS

This project will support local decision makers by:

- Providing timely and accurate information regarding species, habitats, and pressures that threaten their continued health in a manner that can be efficiently integrated into local comprehensive plans
- Providing a forum to detail citizens' concerns relating to the watershed that can be communicated to local decision makers

- Providing a model for innovative public/private partnerships in ecological restoration and capacity building that can be duplicated elsewhere amongst the constituencies of local decision makers

B.7 TECHNOLOGY TRANSFER

The foundation of any adaptive management process includes monitoring and information exchange. This project will monitor water quality, habitat, and other indicators in a manner that is consistent with CMARP, with Contra Costa County's Watershed Atlas data collection efforts and Contra Costa County's Habitat Assessment program. The watershed assessment report generated by this project will be available in hard copy and online for other interested parties to examine.

The adaptive management task of this project will necessarily involve the communication of baseline data and continued monitoring results to all stakeholders in order to determine future management efforts.

B.8 REFERENCES

Brady and Associates, 1993. *North Richmond Shoreline Specific Plan*. Prepared for:

Brookes, A. 1987. Restoring the Sinuosity of Artificially Straightened Stream Channels. *Environmental Geology Water Science*. 10(1):33-41.

Dunne, T., and L. Leopold. 1978. *Water in Environmental Planning*. W.H. Freeman Company. New York NY.

Rinaldi, M., and P.A. Johnson. 1997. Characterization of Stream Meanders for Stream Restoration. *Journal of Hydraulic Engineering*. 123(6):567-570.

Rinaldi, M., and P.A. Johnson. 1998. Stream Meander Restoration. *Journal of the American Water Resources Association*. 33(4):855-865.

Urban Creeks Council of California. 2001. *Restoration Plan for Lower Rheem Creek*.

PART C - PROPOSED SCOPE OF WORK

C.1 BACKGROUND AND GOALS

The **overall goal** of this project is to create a model for the CALFED Watershed Program to increase capacity in urban, financially disadvantaged, minority communities to effectively manage watersheds through the use of CALFED's solution principles and the Watershed Program's primary objectives.

Specific objectives include:

Draft and disseminate a watershed assessment report. Project proponents will collect existing land use, hydrologic, demographic, water quality, and biotic information relating to the area and draft a watershed assessment report. Project proponents will disseminate it in a series of workshops, and broadly through the Internet. This data will inform the design of an on-going sustainable, science and citizen-based adaptive management program.

Restore Lower Rheem Creek to increase habitat and improve water quality. The Urban Creeks Council and local landowners in the lower watershed have been working together for the past year to design a stream restoration plan for Lower Rheem Creek (*Lower Rheem Creek Restoration Plan*). To improve water quality and restore habitat, this proposal seeks funding to implement this plan to restore 2,400 ft of trapezoidal channel along Rheem Creek to a meandering channel, with bio-filtration floodplains and wetlands along the channel according to the designs produced by the Urban Creeks Council (see section H). Lower Rheem Creek serves as a final treatment for urban storm water runoff in the watershed before waters reach the San Pablo Bay. Restored meanders and riparian wetlands will increase filtration of storm water runoff to improve water quality before it enters the Bay. Implementation of the meandering channel design will facilitate channel-floodplain dynamics and help to restore a riparian corridor. Implementation of this task will be done in coordination with all project proponents, **the East Bay Conservation Corps**, and the San Francisco Estuary Project's nursery program.

Create a sustainable, science and community-based adaptive management plan for Lower Rheem Creek and the San Pablo Bay shoreline. Using baseline information, volunteer and student monitoring, local citizens and other stakeholders will engage in a participatory process to identify community needs and desires and to develop a comprehensive management plan for the entire Lower Rheem Creek watershed and San Pablo Bay shoreline. The stream and shoreline will be monitored prior to and after restoration and appropriate management adaptations will be determined from the data collected. An adaptive management team made up of project proponents, federal, state, and local officials, land owners and other stakeholders in the lower watershed will create an adaptive management plan for the area. A series of workshops involving stakeholders will not only inform the adaptive management plan but also provide a forum for conflict resolution and cooperative action.

Engage, educate and employ local citizens and youth in stream restoration activities and environmental monitoring. Throughout its duration, this project will 1) increase familiarity and interest in the Lower Rheem Creek area amongst local citizens and students, 2) involve volunteers to reduce costs associated with restoration and monitoring, 3) increase the capacity of local citizens to manage the resource and 4) employ local residents in the restoration and stewardship of their watershed. This will build on successful models of citizen-based monitoring and restoration practiced by the Urban Creeks Council, the Natural Heritage Institute and others elsewhere in the Bay Area. Students activities will be coordinated with Richmond High School's Science and Industry Technology Partnership Academy and the Ma'at Youth Academy.

Overall project success will be measured by:

- Increased community awareness of the watershed and watershed process
- Number of participants in watershed workshops
- Increased knowledge of watershed function within the community
- Increases in watershed partnerships
- Water quality measurements before and after restoration
- Number of trained volunteers
- Feet of stream meander restored

Success criteria for individual subtasks are listed with each *subtask*.

C.2 PROPOSED WORK TO BE PERFORMED

Task 4. Initiate the Project

- 4.1 Organize and hold a meeting of all project partners to review project goals and objectives, project monitoring and evaluation criteria, contracting protocols, division of labor, timetable, and other procedural details. *Success criteria*: all project partners at meeting and a qualitative assessment of procedural/contracting difficulties throughout life of project.
- 4.2 Meet with key local groups, federal, state, and local agencies (not included as project partners but who's cooperation and input is necessary for successful implementation of this project) to educate and inform them of the goals and objectives of the project, their potential roles in the project, and to understand their concerns relating to the project. *Success criteria*: attendance at meetings and open communication established between project partners and other interested agencies or groups.

Task Deliverables:

- 4.1 Meeting packet describing project goals and objectives, project monitoring and evaluation criteria, contracting protocols, division of labor, timetable, and other procedural details.

Task 5. Assess the Watershed

Project proponents will collect existing land use, hydrologic, demographic, and biotic information relating to the area and draft a watershed assessment. Project proponents will disseminate it hard copy reports and broadly through the Internet. This data will inform the design of an on-going sustainable, science and citizen-based adaptive management program.

- 5.1 Collect existing information and develop web-accessible database cataloging information; contact federal, state, and local agencies, local non-governmental and other groups active in the area to gather relevant data and information; photo document conditions of lower watershed and shoreline; catalogue information; import into consistent formats (e.g. GIS, Adobe Acrobat), make available through website. *Success criteria*: completion of a functional and accessible database by the target date.
- 5.2 Draft a watershed assessment report including the existing land use, habitat, water quality, and other relevant conditions in the lower watershed and shoreline based on the information collected in Task 5.1; make web, hard copies and CD-ROM versions available to public. *Success criteria*: completion of the report by the target date.

Task Deliverables:

- 5.1 Database that catalogues existing information
- 5.2 Watershed assessment report

Task 6. Educate and Reach Out to the Community

Part of the planned activities under this task will be to engage stakeholders in the watershed by informing them of the conditions of the watershed, watershed processes in general, and their potential to create habitat, improve water quality and manage the watershed. Outreach will be to citizen groups and students.

- 6.1 Organize and hold three outreach workshops (North Richmond, Parchester Village, Richmond High School) to inform local citizens and students of findings of Tasks 5.1 and 5.2 and the existing creek restoration design; promote workshops through local groups and other outlets in the community; develop posters and other visual materials to communicate findings for presentation meetings; follow up with interested citizens identified during the meetings. *Success criteria:* execution of these meetings by the target date; the number of attendees present at each meeting.
- 6.2 Modify the creek restoration plan based on comments or concerns raised in outreach meetings; produce new plans with justifications for changes. *Success criteria:* completion of a modified creek restoration plan by the target date.
- 6.3 Organize and host field trips or other work trips twice a year for local high school students through out the entire restoration process to engage them and let them observe the evolution of the landscape throughout restoration. *Success criteria:* number of students attending field trips and work trips; number of students who then participate in out-of-school restoration or monitoring activities on the creek.
- 6.4 Identify local citizens to help with restoration implementation, education, further outreach, and possible continued management of the resource; meet with local groups and federal, state, and local agencies to create a list of interested and available citizens. *Success criteria:* number of citizens identified who are willing to participate in the restoration or monitoring of the lower watershed.

Task Deliverables:

- 6.2 Modified creek restoration plan (if necessary)

Task 7. Restore Lower Rheem Creek

This task will restore 2,400 ft of trapezoidal channel to a meandering channel, with bio-filtration floodplains and wetlands along the channel according to the designs produced by the Urban Creeks Council (see Part H). Lower Rheem Creek serves as a final treatment for urban storm water runoff in the watershed before waters reach the Bay. Restored meanders and riparian wetlands will increase filtration of storm water runoff to improve water quality before it enters the Bay. Implementation of the meandering channel design will facilitate channel-floodplain dynamics and help to restore a riparian corridor. This activity will also inform CALFED conceptual models of stream and tidal marsh restoration and help develop conceptual models of restoration of freshwater streams as they enter San Pablo Bay (a saline waterbody).

- 7.1 Develop and obtain written landowner agreements allowing access onto the restoration site. *Success criteria:* written landowner agreements signed by target date.
- 7.2 Complete grading plan; create blueprints; obtain approval of Contra Costa County Flood Control and Water Conservation District. *Success criteria:* approved grading plan by target date.
- 7.3 Obtain necessary permits from relevant agencies. *Success criteria:* all permits obtained by target date.
- 7.4 Organize and hold one community workshop to train citizens in restoration techniques necessary to complete Lower Rheem Creek restoration plan; arrange for appropriate tools and materials to be available during training. *Success criteria:* workshop well attended and completed by target date.
- 7.5 Order construction materials; contract with construction and landscaping services; hold site visits with potential sub-contractors. *Success criteria:* materials ready and contracts signed by target date.
- 7.6 Install water diversion tubing; stake and delineate path of new channel; install temporary fencing; promote and coordinate a volunteer workday to facilitate this task. *Success criteria:* tubing and fencing installed, channel path delineated by target date.
- 7.7 Excavate new meandering channel; install equipment fencing (performed by subcontractor). *Success criteria:* new channel excavated and equipment fencing installed by target date.
- 7.8 Install erosion control fabric; promote and coordinate a volunteer workday to facilitate this task. *Success criteria:* erosion control fabric installed by target date.
- 7.9 Plant riparian vegetation in and along restored channel; promote and coordinate volunteer workdays to facilitate this task; coordinate with East Bay Conservation Corps. *Success criteria:* completed plantings consistent with *Lower Rheem Creek Restoration Plan*.
- 7.10 Report stream conditions to CALFED; photograph pre- and post-conditions for project photo-monitoring; measure length of stream meander restored, write brief memo describing conditions; repeat photo-monitoring 3 times a year for duration of contract. *Success criteria:* photo-monitoring completed by target date(s).

Task deliverables:

- 7.1 Copies of landowner agreements
- 7.2 Completed grading plan
- 7.10 Photos from photo-monitoring and brief memos describing conditions

Task 8. Design and Implement a Sustainable, Science and Citizen-based Adaptive Management Program

Using baseline information, volunteer and student monitoring, local citizens and other stakeholders will engage in a participatory process to identify community needs and desires and to develop a comprehensive management plan for Lower Rheem Creek. The stream will be monitored prior to and after restoration and appropriate management adaptations will be determined from the data collected. An adaptive management team made up of project proponents, federal, state, and local officials, land owners and other stakeholders

in the lower watershed will create an adaptive management plan for the area. A series of workshops involving stakeholders will not only inform the adaptive management plan but also provide a forum for conflict resolution and cooperative action.

- 8.1 Identify and recruit citizens to participate in an adaptive management advisory team for management and restoration of the lower watershed. *Success criteria:* number of citizens who commit to and participate on the advisory team.
- 8.2 Develop a conceptual model of ecological function in the lower watershed and shoreline including controlling parameters and processes, knowledge gaps, and monitoring and fieldwork that may help to fill these gaps. *Success criteria:* completion of an initial conceptual model for use in Task 8.3.
- 8.3 Organize and hold two meetings of the adaptive management advisory team consisting of project partners and other local citizens/groups identified in 7.1. The first will begin the training in the adaptive management process. The second meeting will begin to identify the desired conditions for the lower watershed, the possible management actions to achieve this condition, and will begin to discuss preferred fieldwork to close knowledge gaps. *Success criteria:* full attendance by adaptive management advisory team.
- 8.4 Develop protocols for data collection, monitoring, and basic research; consult with existing data protocols for local and regional restoration and/or management programs (e.g. CALFED, Contra Costa County Flood Control and Water Conservation District) to be consistent and complete; summarize data collection protocols in report or adopt existing publication. *Success criteria:* development of protocols by the target date.
- 8.5 Train community members in monitoring protocol and techniques in three workshops (one for water quality monitoring, one for habitat assessment, and one for channel surveying); prepare training sessions; acquire necessary field equipment; promote training sessions through existing local organizations and schools. *Success criteria:* number of people trained to monitor conditions.
- 8.6 Implement initial monitoring of identified parameters; monitor macro-invertebrates, water temperature, conductivity, dissolved oxygen, pH, salinity, and nitrates three times a year; perform assessment of habitat yearly; survey channel cross sections and long profile before and after restoration. *Success criteria:* initial monitoring implemented by target date.
- 8.7 Analyze initial results and suggest modifications to restoration/management strategies and conceptual model. *Success criteria:* continuation of adaptive management approach.
- 8.8 Draft a report to document adaptive management conceptual model, assumptions, uncertainties, and monitoring results from Task 8.6. *Success criteria:* completed report by target date.
- 8.9 Seek continued support for adaptive management program; promote restoration action and the need for continued monitoring and management of the resource, continually meet with newly identified interest groups or agencies with a potential stake in the conditions in the Lower Rheem Creek watershed. *Success criteria:* approved funding for continued adaptive management beyond the terms of this initial multi-year project.

Task deliverables:

- 8.8 Adaptive management and monitoring report.

C.3 TARGET COMPLETION DATES

The table below lists the tasks, deliverables and respective expected completion dates. The completion dates are listed as months from start of project and assume that the project is the full 36 months (July 1, 2003 to June 30, 2006). If the start date is later than July 1, 2003, these will be adjusted appropriately.

Task/Deliverable	Target Completion Date(s)
Task 1. Project Administration	June 30, 2006
1.2 Quarterly Reports	October 10, 2003 and every 3 months thereafter
1.4 Contract Summary Form	October 10, 2003
1.5 List of Subcontracted Tasks, etc.	October 10, 2003
1.6 Expenditure/Invoice Projections	December 30, 2003 and every 6 months thereafter
1.7 Project Survey Form	June 30, 2006
Task 2. CEQA/NEPA Documentation and Permits	October 10, 2003
2.1 Necessary Permits	October 10, 2003
Task 3. QAPP	October 10, 2003
3.1 Approved QAPP	October 10, 2003
Task 4. Launch the Project	July 30, 2003
4.2 Meeting packet describing project goals and objectives, project monitoring and evaluation criteria, contracting protocols, division of labor, timetable, and other procedural details.	July 30, 2003
Task 5. Assess the Watershed	October 30, 2003
5.2 Database that catalogues existing information	September 30, 2003
5.3 Watershed assessment report	October 30, 2003
Task 6. Educate and Reach Out to the Community	June 30, 2006
6.3 Modified Restoration Plan (if necessary)	December 30, 2003
Task 7. Restore Rheem Creek	June 30, 2005
7.1 Copies of landowner agreements	September 30, 2003
7.2 Completed grading plan	December 30, 2003
7.9 Photos from photo-monitoring and brief memos describing conditions	October 30, 2003 and every 4 months thereafter
Task 8. Design and Implement a Sustainable, Science and Citizen-based Adaptive Management Program	June 30, 2006
8.8 Adaptive Management and monitoring	December 30, 2005

report	
Task 9. Draft and Final Reports	
9.1 Draft report	March 30, 2006
9.2 Final report	May 30, 2006

PART D1 - BUDGET SUMMARY SHEET – TASK BUDGET BREAKDOWN

	Proposition 13 Funds	Other Project Funds	Total Budget
1. Task 1 – Project Administration	\$ 10,412	\$	\$
2. Task 2 – CEQA/NEPA Documents and Permits	10,522		
3. Task 3 – Quality Assurance Project Plan	2,372		
4. Task 4 – Initiate the Project	4,995		
5. Task 5 – Assess the Watershed	12,442		
6. Task 6 – Educate and Reach Out to the Community	37,645		
7. Task 7 – Restore Lower Rheem Creek	297,585	25,000* 120,000**	442,585
8. Task 8 – Monitoring and Adaptive Management	59,607		
9. Task 9 -- Draft and Final Reports	5,225		
TOTAL BUDGET	\$440,870	\$145,000	\$585,870

*Existing California Coastal Conservancy grant to design conceptual restoration plan

**Landowner provided access to 4 acres of land for restoration

PART D2 - BUDGET SUMMARY SHEET – LINE ITEM Budget

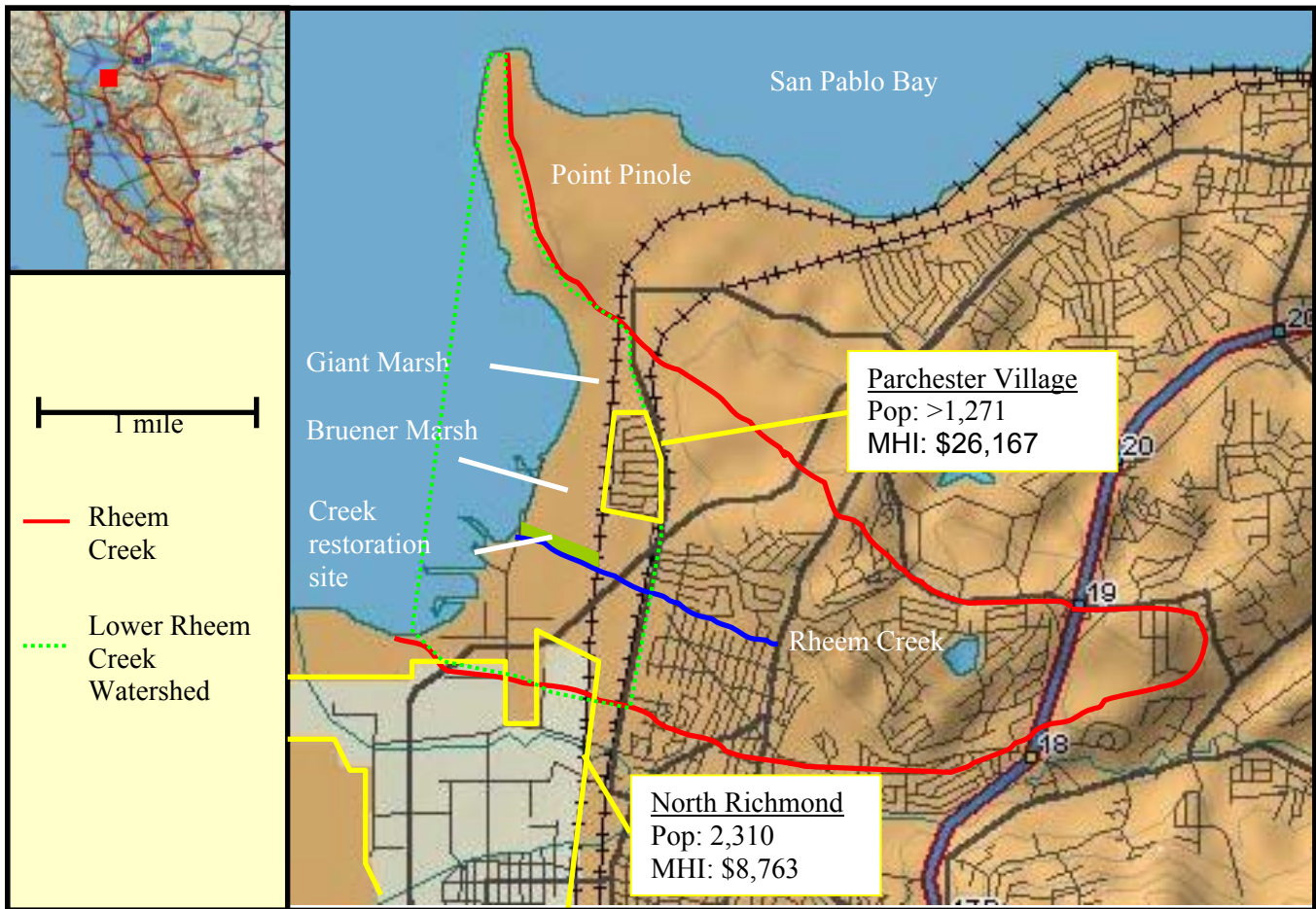
	Proposition 13 Funds	Other Project Funds	Total Budget
1. Personnel Services	<u>\$181,596</u>	<u>\$25,000</u>	<u>\$</u>
2. Operating Expenses	<u>1,600</u>	<u></u>	<u></u>
3. Property Acquisitions		120,000	
a. Equipment	<u>65,000</u>	<u></u>	<u></u>
b. Furniture	<u></u>	<u></u>	<u></u>
c. Portable assets	<u></u>	<u></u>	<u></u>
d. Electronic data software/hardware	<u></u>	<u></u>	<u></u>
e. Processing equipment	<u>9,000</u>	<u></u>	<u></u>
f. Miscellaneous	<u>3,000</u>	<u></u>	<u></u>
4. Professional and Consultant Services	<u>7,500</u>	<u></u>	<u></u>
5. Contract Laboratory Services	<u></u>	<u></u>	<u></u>
6. Construction Expenses	<u>85,000</u>	<u></u>	<u></u>
7. General Overhead	<u>88,174</u>	<u></u>	<u></u>
8. TOTAL BUDGET	<u>\$440,870</u>	<u>\$145,000</u>	<u>585,870</u>

9. Describe the source and nature of the matching funds.

\$25,000 from the California Coastal Conservancy to Urban Creeks Council to design restoration plan for Lower Rheem Creek.

\$120,000 in landowner provided access to 4 acres of land for restoration (not a property acquisition)

PART E – PROJECT MAP AND PHOTOS



Lower Rheem Creek facing upstream.



Lower Rheem Creek facing down-stream.



Lower Rheem Creek Shoreline and Pt. Pinole



Bruener Marsh and Parchester Village in distance



PART F – ENVIRONMENTAL INFORMATION FORM

ENVIRONMENTAL INFORMATION FORM

NEPA/CEQA

1. Will this project require compliance with CEQA, NEPA, or both? Yes X No _____
2. If you checked “no” to question 1, please explain why compliance is not required for the actions in this proposal.
3. If the project will require CEQA and/or NEPA compliance, identify the lead agency(ies).

CEQA Lead Natural Heritage Institute

Agency

NEPA Lead

Agency

4. Please check which type of document will be prepared.

CEQA

Categorical Exemption

X

Initial Study

Environmental Impact Report

NEPA

Categorical Exclusion

Environmental Assessment/FONSI

Environment Impact Statement

CEQA Section 15304(d) Minor alterations in land, water, and vegetation on existing officially designated wildlife management areas or fish production facilities which result in improvement of habitat for fish and wildlife resources or greater fish production.

5. If the CEQA/NEPA process is not complete, please describe the estimated timelines and cost for the process and the expected date of completion.
3 months, \$10,000
6. If the CEQA/NEPA document has been completed:

What is the name of the document? _____

Please attach a copy of the CEQA/NEPA document cover page to the application.

APPLICATION FORM
Natural Heritage Institute
APPLICATION # 369

Please indicate what permits or other approvals may be required for the activities contained in your proposal and which have already been obtained. Please check all that apply.

LOCAL PERMITS AND APPROVALS	Needed?	Obtained?
Conditional use permit	No	
Variance	No	
Subdivision Map Act	No	
Grading permit	Yes	No
General plan or Local Coastal Program amendment	No	
Specific plan approval	No	
Rezone	No	
Williamson Act Contract cancellation	No	
Local Coastal Development Permit	No	
Other		
STATE PERMITS AND APPROVALS	Needed?	Obtained?
Scientific collecting permit	No	
CESA compliance: 2081	No	
CESA compliance: NCCP	No	
1601/03	Yes	No
CWA 401 certification	No	
Coastal development permit	No	
Reclamation Board approval	No	
Notification of DPC or BCDC	Yes	No
Other		
FEDERAL PERMITS AND APPROVALS	Needed?	Obtained?
ESA compliance Section 7 consultation	No	
ESA compliance Section 10 permit		

APPLICATION FORM
Natural Heritage Institute
APPLICATION # 369

	No	
Rivers and Harbors Act	No	
CWA 404	No	
Other		
PERMISSION TO ACCESS PROPERTY		
Permission to access city, county or other local agency land. If "yes," indicate the name of the agency: _____	No	
Permission to access State land. If "yes," indicate the name of the agency: _____	No	
Permission to access federal land. If "yes," indicate the name of the agency: _____	No	
Permission to access private land. If "yes," indicate the name of the landowner (if multiple landowners, indicate how many individuals will be involved and what percentage have already granted permission: _____	Yes, 2 land owners,	Spoken agreement from both

PART G – LAND USE QUESTIONNAIRE

1. Do the actions in the proposal involve construction or physical changes in the land use? Yes X No

If you answered “yes” to # 1, describe what actions will occur on the land involved in the proposal.

Restoration of stream meander along 2,400 feet of stream.

If you answered “no” to # 1, explain what type of actions are involved in the proposal (i.e., research only, planning only).

2. How many acres of land will be subject to a land use change under the proposal? 0
(Land use will not change on any of the land. The land on which the stream will be restored is currently vacant, fallow, undeveloped, open space. The restoration will occur on about 4 acres of this land.)

3. What is the current land use of the area subject to a land use change under the proposal? What is the current zoning and general plan designation(s) for the property? Does the current land use involve agricultural production?

- a) Current land use Open Space
b) Current zoning Open Space
c) Current general plan designation Open Space
d) Does current use involve agricultural production? Yes No X

4. Is the land subject to a land use change in the proposal currently under a Williamson Act contract?
Yes No X

5. What is the proposed land use of the area subject to a land use change under the proposal?

 Open Space

6. Will the applicant acquire any land under the proposal, either in fee (purchase) or through a conservation easement? Yes No X

- a) If you answered “yes” to 6, describe the number of acres that will be acquired and whether the acquisition will be of fee title or a conservation easement:
b) Total number of acres to be acquired under proposal
c) Number of acres to be acquired in fee
d) Number of acres to be subject to conservation easement

7. For all lands subject to a land use change under the proposal, describe what entity or organization will manage the property and provide operations and maintenance services.

8. Will the applicant require access across public or private property that the applicant does not own to accomplish the activities in the proposal? Yes ☒ No ☐
9. For land acquisitions (fee title or easements), will existing water rights be acquired? Yes ☐ No ☒
10. Does the applicant propose any modifications to the water right or change in the delivery of the water? Yes ☐ No ☒

If "yes" to 10, please describe the modifications or changes.

PART H – SUPPORTING RELEVANT DOCUMENTS

H.1 PROJECT PROPONENT QUALIFICATIONS

The **Neighborhood House of North Richmond** has been in existence as a comprehensive community-based social service provider since 1954. It is a 501(c)(3) non-profit organization. Its mission is to improve the quality of life for all residents of North Richmond, Parchester Village, Richmond, San Pablo, and West San Pablo. For nearly 50 years it has provided local residents with an array of employment, education, literacy, and health services and has represented the community in environmental justice issues. **Its history as both a service provider and an advocate for local residents ensures its ability to perform much of the outreach and education components of this project.**

The **Parchester Village Neighborhood Council** has served as a resident forum and service provider for over 30 years. It is a 501(c)(3) non-profit organization staffed entirely by volunteers from within Parchester Village. For years, it has run a summer youth activity program that includes an environmental education component. The PVNC represents the most direct means to out reach to residents in Parchester Village. **Its frequent meetings, committee meetings and community events, combined with its summer youth environmental education program ensure its ability to reach local citizens and perform much of the outreach and education components of this project.**

Richmond High School's **Science and Industry Technology Partnership Academy** places special emphasis on developing environmental responsibility amongst its students. The goal of the Academy is to provide opportunities for students to work with local environmental agencies and community leaders. Through activities such as visiting and learning about the local watersheds, hiking, and exploring aquatic life, students' awareness of key environmental issues vastly improves. Mentors, job shadowing, and field trips work together to give academy students the unique opportunity to explore a wide variety of careers in the area of scientific research, industrial arts and computer technology. The Academy presents an excellent opportunity to build capacity in young, local citizens. **Its experience in creek restoration, its wealth of talented teachers and resources, and its access to students ensure its ability to provide the environmental education and outreach component of this project.**

The **Urban Creeks Council of California**, a non-profit organization, has restored reaches on dozens of creeks in the past 15 years. UCC helped develop one of the first watershed councils in California and remains on the forefront of stakeholder driven restoration efforts. Recent projects include: Baxter Creek in Richmond and El Cerrito, Wildcat Creek in North Richmond and San Pablo, Village Creek in Albany, and Blackberry Creek in Berkeley. Over the past year, the Urban Creeks Council has been working with private developers who are planning to build an office/technology park to the north of Rheem Creek to set aside enough land. As a result of these and other preliminary activities, the UCC has developed a good working relationship with landowners in the watershed. **Its experience in establishing stakeholder groups, working with landowners, and restoring urban streams ensures its ability to perform much of the landowner outreach, restoration oversight, and agency coordination on this project.**

The **Natural Heritage Institute**, a non-profit science and law firm, has 14 years experience restoring natural systems and designing adaptive management programs in California and around the world. NHI has received approximately a million dollars in funding from CALFED over the past eight years. This money has funded many projects including a watershed science plan for Marsh Creek in nearby eastern Contra Costa County, design of a restoration plan for the Marsh Creek delta in Big Break, technical studies regarding island subsidence reversal in the Sacramento-San Joaquin delta, reservoir re-operation studies in the San Joaquin Valley, and others. NHI also has extensive experience establishing adaptive management programs with a focus on both large-scale systems, such as the Rio Grande and the Okavango (in Botswana) and smaller scale systems such as the Guadalupe River, the Yolo Bypass, and Deer Creek in Nevada County.

Richard P. Walkling, MLA, at the Natural Heritage Institute has 6 years experience managing complex government contracts and overseeing project management duties. NHI's CFO Norm Harris, MBA who has 15 years of finance and administrative experience in the non-profit sector, will support the contract management functions for this project. NHI also has a staff of four additional employees dedicated

exclusively to administering grants and contracts. **NHI's staffing and knowledge in contract management, restoration ecology, and adaptive management ensure its ability to manage the project, design and implement an adaptive management program, and oversee the restoration of Rheem Creek.**

H.2 List of Letters of Support/Intent Sent to SWRCB

Urban Creeks Council of California, Lisa Viani
Neighborhood House of North Richmond, Whitney Dotson
Parchester Village Neighborhood Council, Joe Brown
Richmond High School-Science and Industry Technology Partnership Academy, Lana Husser
Ma'at Youth Academy, Sharon Fuller
West County Toxics Coalition, Henry Clark
Trails for Richmond Action Committee, Bruce Beyaert

H.3 Example Letter of Notification

Date

To Whom It May Concern:

The Natural Heritage Institute (NHI), the North Richmond Neighborhood House (NRNH), the Parchester Village Neighborhood Council (PVNC), and the Urban Creeks Council of California (UCC), and Richmond High School's Science and Industry Technology Partnership Academy have submitted a proposal to the CALFED Watershed Program entitled *Enhancing Local Capacity in North Richmond and Parchester Village to Manage and Restore the Lower Rheem Creek Watershed*.

If funded, the proposed project would :

- Develop a watershed assessment;
- Implement a the restoration of Lower Rheem Creek as detailed in the Urban Creeks Council's *Lower Rheem Creek Restoration Plan*; and
- Build community capacity to effectively manage the watershed.

We think this is an excellent opportunity for CALFED to partner with local groups in restoring and managing the watershed for the following reasons:

- Lower Rheem Creek, the Bay shoreline and its 400+ acres of undeveloped wetlands and uplands are unique, compelling and ecologically valuable resources of importance to the entire Bay-Delta ecosystem and its at-risk species.
- A detailed restoration design already exists with landowner and stakeholder support, allowing for immediate community participation in an efficient, affordable, implementable restoration project.
- Local groups already deeply involved in the community (social service providers, local high school, local environmental groups) have designed this capacity building project, thus ensuring access to local citizens and increasing the likelihood of success.

The project is consistent with the vision for the area as described in *The North Richmond Shoreline Specific Plan* and other efforts ongoing in the watershed.

Please contact us if you would like a copy of the proposal as submitted to CALFED. We invite you to review and comment on it and express your support to CALFED.

Sincerely,

Richard P. Walkling
Natural Heritage Institute
510.644.2900 x109

H.4 Overall Plan from Lower Rheem Creek Restoration Plan

